

ABSTRACT

There is provided a semiconductor-type three-axis acceleration sensor having a high shock resistance, a small difference between outputs of piezo resistors of X-axis, Y-axis and Z-axis, a small size, high sensitivity and a high output. A flexible arm is composed of flexible widening parts and a flexible parallel part. The flexible widening part has a maximum stress part. The piezo resistors are arranged on an upper surface of the flexible arm so that a terminal of the piezo resistor is positioned at the maximum stress part. The Z-axis piezo resistors are positioned close to the width centerline of the flexible arm, while the X-axis and Y-axis piezo resistors are apart from the width centerline. Moreover, the Z-axis piezo resistors are shifted in the longitudinal direction of the flexible arm from the maximum stress part so as to reduce the output difference between the X-axis, Y-axis and Z-axis piezo resistors.